Learning About Life Cycles
Teacher Background Information (SC000200)

This unit in Kindergarten science emphasizes observation and classification. Children learn that almost all animals go through distinct stages of birth, growth, adulthood, and old age. While the topic of death may come up in conversations, it is not part of this lesson.

Children learn that some animals are born live, while others emerge from eggs. In this content area children's observations may be limited by their content understanding. For example, you may find that children assume that guppies or zebra fish are born live, because they can (at times) be seen emerging from the parent fish. It is not necessary to discuss the fact that fish maintain eggs inside their body. The key concept that is related to these observations is parental care; every animal has some strategies to keep their offspring safe. In amphibians, fish, birds, and reptiles the strategies normally include an egg. In birds and mammals some degree of parental care is necessary because the babies are born in a helpless condition.

The stage called growth includes an understanding that many physical and mental skills must be acquired to reach adulthood. Children are justifiably proud of the progress they are making in their first year of school. It is easy to use this pride to motivate their observations of animals that are learning new survival skills (either through practice or imitation).

When teaching children about old age, the time is ideal to encourage sensitivity. Encourage children to appreciate the experience of older adults by finding models in the animals they observe. "What can you learn by listening to an older person?"

This unit teaches not only content and skills, but also the attitudes of appreciation and humane treatment of animals. The teacher is encouraged to select several cultures to maintain in the classroom, and to give children limited responsibility to help those animals survive and thrive.

Set up an observing station in your classroom. Make recording animal behaviors a regular part of the curriculum, not only during this unit but also throughout the year.

Selecting Animals for Your Classroom

Do not be lured by the "cuteness" of fuzzy mammals. In general, they are poor choices for a busy classroom. The following quick summary might help you select animals to raise.

Mammals: Never bring wild animals to class. Pet store animals such as gerbils and white mice have lower (although some) risk of disease. Mammals require continual care. They can easily be abused by children inadvertently—a lesson you do not want to teach. And left to their own devices, they can reproduce so much that you become an adoption agency. Think before you choose mammals. Never bring in guinea pigs or rabbits; they have a dander which is very persistent and to which some children are highly allergic. This dander cannot be removed from carpets, so the rabbit you raise this year might make a child sick in years to come.

Reptiles
Some small lizards and anoles make ideal pets. They can usually be left for weekends without constant supervision, and generally do not pose a significant danger to children. Avoid snakes, because they can become nervous and even non-venomous snakes can give nasty bites. Turtles harbor salmonella bacteria, and are inappropriate for a classroom where children eat and may not be responsible enough to wash their hands every time.

Birds
Birds are highly sensitive to noise and chaos. They also carry a number of diseases. In general, they are not appropriate for a busy kindergarten room. Occasionally a teacher has a bird that has become used to noise. But the bird needs constant temperature (even on weekends when the school may try to save money by turning down the heat) and almost constant food and water. Think twice.

Amphibians
Raising frog eggs collected from a pond has been a tradition in many classrooms. If the eggs are kept high in oxygen (with a bubbler) they usually do well. While this unit does not include metamorphosis, the appearance of the jelly-like egg (with visible tadpole inside) is a great observation station. Plan to release the pollywogs back into the wild as soon as they emerge, because they require more protein for metamorphosis than most aquaria can provide.

Fish
Fish are ideal for this unit. Choose some that "appear" to have live births like zebras and guppies, as well as some that have eggs that might be observed on the surface of the water.

Arthropods
Insects are the most ideal cultures for this unit. Choose insects that do not undergo complete metamorphosis, to avoid unnecessary complications. Easy to maintain are:

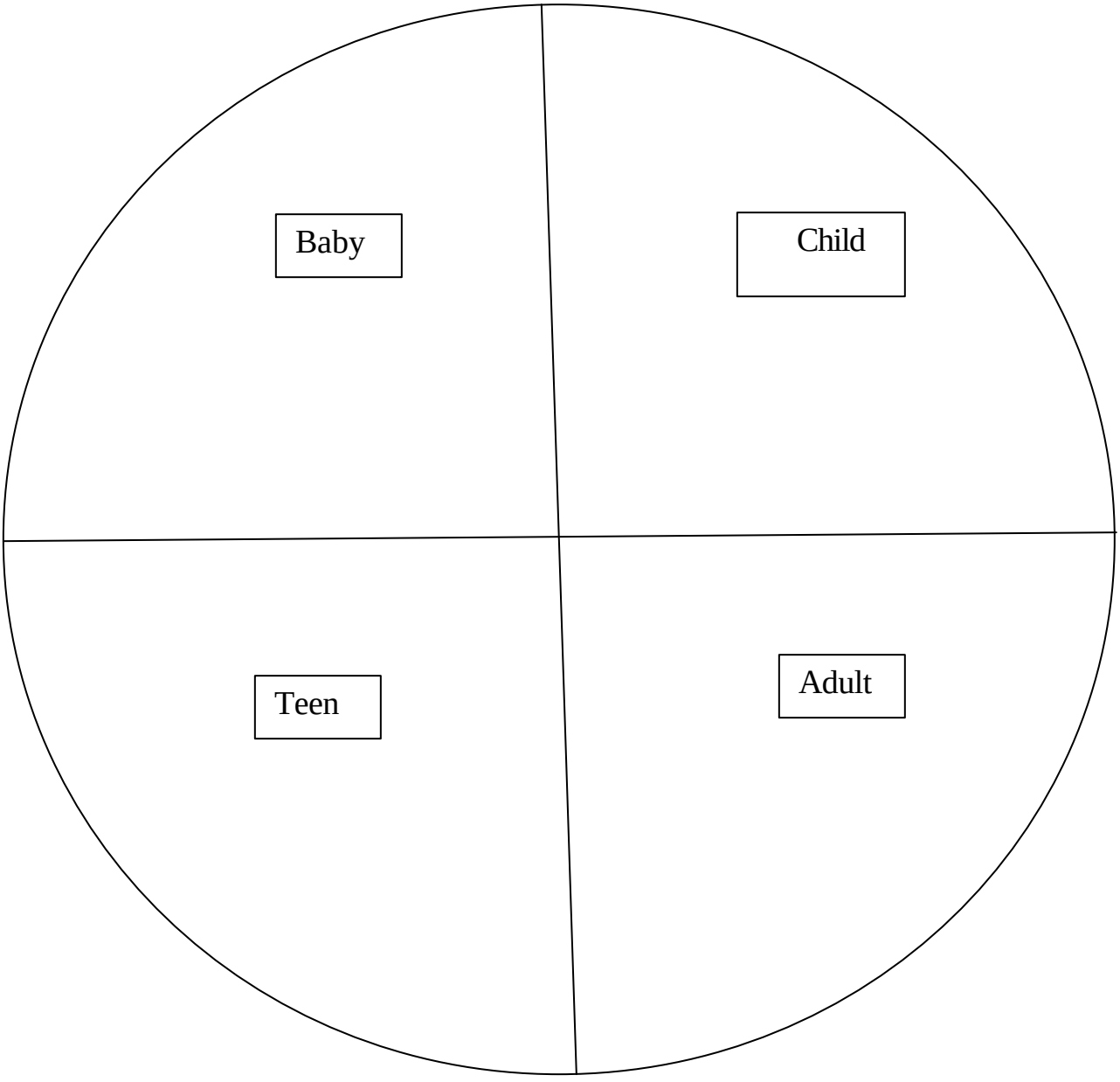
- Roly-poly bugs, sowbugs, pillbugs
- Crickets
- Mealworms (although they do undergo metamorphosis)

Hermit crabs do well in the classroom and are easy to maintain with a little vegetable waste.

Mollusks
Snails are good to observe, and may reproduce if you select the right species. Consult your aquarium specialist.

Before you choose an animal, check for safety: Kwan, Terry, and Juliana Texley. *Exploring Safely*. Arlington, Virginia: National Science Teachers Association, 2002.

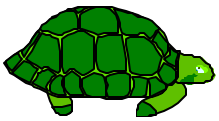
Plan for Life Wheel (Lesson 1)



Sample of Teacher Timeline:

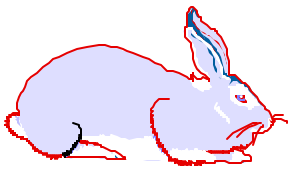
Born on March 17, 1968	Started Kindergarten	Graduated from high school	Graduated from college	Started teaching	Got married	Had children

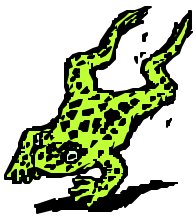
What Grows?



Things That Grow	Things That Do Not Grow

Not All Organisms Grow The Same Way





Like Parent	Not Like Parent

Predicting Growth Patterns

Animal Activities: Young Animal

Time	Sleeping	Eating	Playing or Hunting
4			
3			
2			
1			

Animal Activities: Adult Animal

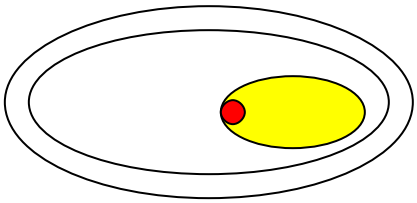
Time	Sleeping	Eating	Playing or Hunting
4			
3			
2			
1			

Live vs. Hatched

Born Alive	Hatch From Eggs

Animals that Hatch from Eggs

Baby



Feed Baby Bird

Protect Baby Bird

Life Cycles




	Child	Adult	Older

Photos from United States Fish and Wildlife Service Larger photos for use on a bulletin board can be downloaded at www.fws.gov. Use the search engine to find specific photos.